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ABSTRACT

Every speech community has a baby talk register (BT) of phonological, grammatical, and lexical features regarded as primarily appropriate for addressing young children and also for other displaced or extended uses. Much BT is analyzable as derived from normal adult speech (AS) by such simplifying processes as reduction, substitution, assimilation, and generalization. Not all BT features are simplified: some manifest clarifying processes (and redundancy), diminutivizing or hypocoristic processes (add effect), identifying processes (mark the register) or other kinds of processes. The BT register also has independent material not derivable from AS. BT is variable in degree of deviance from the AS norm, and the variability tends to neglect the speaker's assessment of the hearer's language development as well as other factors in the communication situation. The use of BT is neither a necessary nor a sufficient condition for the acquisition of AS but assists in the child's language development. BT is universal because of its effectiveness in language socialization and in the transmission of social roles such as age, sex and kin, and cultural values of objects and actions (good, bad, sweet, dirty, dangerous, etc.).
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BABY TALK AS A SIMPLIFIED REGISTER*

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ABSTRACT

Every speech community has a baby talk register (BT) of phonological, grammatical, and lexical features regarded as primarily appropriate for addressing young children and also for other displaced or extended uses. BT is one of a set of 'simplified' registers for use with people felt to be unable to understand normal adult speech (AS) properly. Much BT is analyzable as derived from AS by such simplifying processes as reduction, substitution, assimilation, and generalization. Not all BT features are 'simplified': some manifest clarifying processes (and redundancy), diminutivizing or hypocoristic processes (add affect), identifying processes (mark the register) or other kinds of processes. The BT register also has independent material not derivable from AS. BT is variable in degree of deviance from the AS norm, and the variability tends to reflect the speaker's assessment of the hearer's language development as well as other factors in the communication situation. The use of BT is neither a necessary nor a sufficient condition for the acquisition of AS but assists in the child's language development. BT is universal because of its effectiveness in language socialization and in the transmission of social roles such as age, sex and kin, and cultural values of objects and actions (good, bad, sweet, dirty, dangerous, etc.).

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0. Introduction.

In all speech communities there are probably special ways of talking to young children which differ more or less systematically from the more 'normal' form of the language used in ordinary conversation among adults. This special 'register' of the language felt to be appropriate for use with young children is often called 'baby talk' (hereafter BT); it is one of a set of such registers which are used in addressing people such as foreigners, retarded, or hard of hearing who are felt not to be able, for one reason or another, to understand normal language in the usual way. Since these registers in at least some respects seem to be simplified versions of the normal language they have been called 'simplified registers' (Ferguson 1972), and linguists have attempted to analyze their structure, not only to provide characterizations of such marginal or deviant phenomena, but also to clarify the notions of simplification in language and to gain a better understanding of the use of language. The purpose of the present paper is to summarize the findings of linguists as to the structure and use of baby talk in different languages, regarded from this point of view.¹

In 1921 Antoine Meillet, the great French linguist, in one of his characteristic brief notes in the Bulletin of the Linguistic Society of Paris reported observations on the way a French mother modified her pronunciation of the initial consonant of genoux 'knees' when addressing her baby, and he pointed to the modification of speech for addressing children as a promising field of linguistic research. The first modern linguist to investigate the problem in some depth, however, was probably the famous Danish linguist, Otto Jespersen, who discussed it in his 1923 book Language, which gave more attention to the speech of children and to children than any general work in linguistics since that time. The phenomena of baby talk had been noticed by scholars long before that and references go back at least as far as the Roman grammarian Varro in the first century B.C. (Heraeus 1904). A number of American anthropologists studying American Indian languages noted baby talk items in their fieldwork and mentioned them in their papers and short notes, the most important being a brief account of Nootka baby talk by the great student of language Edward Sapir (1924). The American linguist Allen Walker Read presented a paper on the topic in December 1946 at a meeting of the Modern Language Association (Read 1946), and later, in response to requests gave versions of that paper as addresses on at least six different occasions between 1956 and 1962. Unfortunately his paper and his large collection of material were never published. He was particularly interested in tracing opinions about the use of baby talk, and cited authors from the seventeenth century to the twentieth. He was also interested in the contexts other than addressing children in which baby talk was used and his analysis noted all the principal contexts mentioned by later linguists.

¹Note that in this paper no attention is given to questions of the origin and diffusion of BT features which are of considerable importance for understanding processes of language change but are less relevant for the purposes of the paper. See, however, comments on these questions in Ferguson 1964: 104, III-2; Bynon 1968: 136-48; Crawford 1970: 12, 13.

The detailed description of baby talk in modern linguistic literature began with four articles, each written essentially in independence of the others, which appeared between 1948 and 1956 (Casagrande 1948, Voegelin and Robinett 1954, Austerlitz 1956, Ferguson 1956) analyzing the baby talk registers of Comanche, Hidatsa, Gilyak, and Syrian Arabic. Ferguson (1964) made use of these four papers and other articles, and recent papers generally refer back to this group of studies.

1. Simplified Registers.

One of the central facts about human language is the way it varies in structure depending on the use to which it is put. Every speech community and every individual user of language exhibits this kind of variation in language behavior. It is not only the semantic content which varies according to the use but also phonological and syntactic patterns, choice of vocabulary and forms of discourse. In some societies this variation can be illustrated dramatically by turning the dial of a radio to find a particular program. It often takes less than a sentence of speech to decide whether we are hearing a news broadcast, commercial message, 'soap opera,' campaign speech, or sermon. In other societies a tape recording might just as readily be identified as adolescent instruction, recitation of a myth, joking between uncle and nephew, or spirit possession.

Since most of this variation is conventional, systematic, and culturally shared, it lies in the province of the linguist to analyze it and search for universal tendencies and explanatory principles. The notion of 'register' serves as a basic organizing concept in this kind of analysis (Reid 1956, Ellis and Ure 1969). On the one hand register variation is distinct from regional and social dialect variation and on the other hand it is distinct from idiosyncratic and stylistic variation. A register in a given language and given speech community is defined by the uses for which it is appropriate and by a set of structural features which differentiate it from other registers in the total repertory of the community.

As with dialect variation, the determination of register boundaries and significant discontinuities is to a certain extent arbitrary since in some instances the variation may be continuous and in other instances there may be overlapping of two or more quite different registers. The 'naturalness' of register analysis is apparent in the extent to which clusters of structural features consistently delineate identifiable uses, and the analyst must be prepared to find different boundaries as well as different kinds of criterial features in different speech communities. Some of the most promising findings of register analysis at this stage come from comparing the structural features of similar registers in different languages, as in the comparison of the language of municipal traffic codes in Great Britain and the Soviet Union. (Report 1972)

Each speech community seems to have one or more registers appropriate for use with people who for one reason or another are not likely to understand normal adult speech in the usual way. Several reduced or 'simplified' registers of this kind have been studied, e.g. the 'foreigner talk' addressed to foreigners who do not know one's language (Ferguson, 1975, English; Clyne 1968, German), a 'language of socialization' addressed to 4-8 year olds (Gleason 1973, English), a foreign language instruction register (Henzl 1974, Czech), and baby talk.

The processes which derive simplified registers from AS are not always simplifying in nature. Some processes are clarifying in that they modify in the direction of greater redundancy, often by adding material to the model. Sentences may be pronounced more slowly and articulated more carefully; vowels normally reduced or elided may be supplied; words, phrases or whole sentences may be repeated; ambiguous words or near homophones may be replaced by synonyms; everything may be uttered more loudly; ambiguous constructions may be paraphrased. Such clarifying processes are part of the competence of all users of language and occur outside simplified registers. Details vary across languages and indeed across registers in the same language. For the linguist they are of special interest in the clues they offer for basic 'underlying' forms and they raise the old issue of 'clarity norm' vs. 'frequency norm' (cf. Hockett 1955, 220-1). The 'clarified' pronunciation of people addressing young children and their role in child language development are discussed in Leopold 1939-49, I, 9 under the concept 'presentation' (cf. also Braine 1974:288-91).

Some processes apparent in simplified registers are neither simplifying nor clarifying but seem to be 'expressive' i.e. add affect to the utterances, as in the high frequency of diminutive and hypocoristic formations in Baltic and Slavic BT registers. These diminutives are typically more complex than the corresponding non-diminutives and usually do not clarify the utterance in any obvious way. Other processes are adaptive to the target group or the situation in ways which seem not to be simplifying or clarifying. For example, in speaking to deaf people the voice may be lowered almost to inaudibility to normal hearers and the motions of the lips may be exaggerated beyond their clarifying effect for normal hearers. Some processes may represent the use of attention-getting devices or attempts at getting feedback from the addressee on his level of understanding, as in the use of rising intonations and tags such as see? savvy? OK? in various simplified registers. All these kinds of processes and doubtless others (e.g. sound symbolism, archaizing, euphemism) also seem to mark a particular register as being in use and have a special salience corresponding to dialect markers and recognized stylistic features.

In some instances particular features and hence processes may seem to have only this identifying function; this is especially obvious in cases of lexical replacement as in understand → savvy in English foreigner talk or rabbit → bunny in English BT.²

2. Structure of Baby Talk.

The structure of the BT register in a particular language could be shown by a formal 'grammar' of the register which makes explicit the processes relating the grammar of the AS to all possible BT utterances. BT grammars of this kind for different languages could be compared, and cross-language generalizations could be discovered and presented. Since we have neither the grammars nor an adequate theoretical framework in which to write them and compare them, we must settle

² Absolute, pure examples are difficult to find since almost always some element of simplification, clarification, or other kind of process can be claimed. Thus bunny avoids the difficult sound (r) and drops the troublesome final consonant, but since something more directly related to rabbit such as wabby or babby would be possible, it seems reasonable to see this item as primarily register-identifying, whatever its historical origin may have been.

for a general characterization based on existing descriptions. We can, however, organize the presentation according to types of linguistic processes, beginning with those which seem to simplify the AS.

Since a simplified register is largely a reduced and otherwise modified version of normal adult speech, a promising way of describing it is to specify the relations between adult speech, viewed as the source or norm, and the register, viewed as a derivative or deviation. Such specification can be done by identifying processes of the form $X \rightarrow Y$ ('X becomes Y') or $X \rightarrow Y/Z$ ('X becomes Y under conditions Z') in which the input is some part of the AS structure and the output is the corresponding part of the structure of the simplified register. Examples of such processes are:

(1) Japanese: AS [s] $\rightarrow$ BT [tʃ]

as in the honorific suffix -san of adult speech and the corresponding suffix -chan of baby talk (Chew 1969, Fischer 1970); or

(2) English: AS COPULA $\rightarrow$ BT $\emptyset$ /N __ Adj.

as in the word is in the sentence the baby is hungry of adult speech having no corresponding equivalent in a baby talk sentence baby hungry (Ferguson 1971). Process statements of this kind ('rewrite rules') are a widely used analytic device in contemporary linguistics and are particularly appropriate where two related structures are to be systematically matched in a descriptive account.

Two dangers must be recognized in the use of synchronic process statements in linguistic analysis. The first is the temptation to interpret a process as a chronological sequence in which X occurs in real time before Y. Linguistic analysis is often concerned with such diachronic processes, as when a linguistic change between an earlier period and a later period in the history of a language is being analyzed. Diachronic processes will be rigorously identified as such in this paper and in formal notation the traditional inequality sign will be used ($X > Y$, $X > Y/Z$) instead of the arrow.

Thus:

(3) Latin BT papa ~ pappa 'food' $>$ Spanish: BT papa 'food'

asserts a diachronic process: The earlier Latin form 'became' the Spanish form, a shorthand way of expressing the linguistic continuity of these elements in the language behavior of particular speech communities over a period of centuries.

(4) Japanese BT nenne-da-nenne $>$ nenne sinasai 'go to sleep'

asserts the linguistic development from the earliest stage of baby talk used by the mother to a later stage when the child is a little older.

The other danger in using process statements is the possibility of interpreting a particular linguistic process as an actual process in the mental activity of a language user. For example, the relation between English AS stomach and BT tummy could be represented by the processes of initial cluster reduction, final consonant deletion, and replacement of the final vowel by the diminutive suffix -y.³

(5a) AS #CCV → BT #CV

(5b) AS VC# → BT V#

(5c) AS CV# → BT C-y#

While such process statements obviously represent plausible mental processes, it is perfectly possible that a particular user of the language, child or adult, might learn and use both forms independently and never 'notice' the systematic relation between them. Additional behavioral evidence, such as the creation of a new baby talk from manifesting the processes (e.g. stopper → toppy or spinach → pinny) is required before claims could be made about their 'psychological reality.'⁴

By expressing these cautions about the interpretation of linguistic process statements I do not mean that process statements are empty formalisms or are purely linguistic rules without psychological or social processes of language behavior, but they must not be interpreted automatically in such terms. To continue the stomach/tummy example, the processes of cluster reduction, final consonant weakening, and the addition of hypocoristic suffixes are well attested processes in child language development and the derivation of baby talk registers⁵ in many languages, and it seems very likely (a) that the first creations of tummy were the result of such processes and (b) that the presence of the stomach/tummy pair in the repertory of users of English contributes to the phonological organization which forms part of their processing of language (cf. Ferguson and Farwell 1973).

³ The rules are given here in simplified form. In writing a formal 'grammar' of English baby talk, more specific rules of cluster reduction and final weakening would be given, comparable to similar rules in child language development and language change (cf. Ingram 1974) and explicit treatment of rule ordering would be necessary.

⁴ The etymologizing of a BT form by showing its derivation from an AS model by linguistic processes is fraught with the same difficulties as any etymologizing, whether of word histories or nonce formation (cf. Malkiel 1962). For example, the final y of tummy replacing -ach may not involve final consonant loss at all but may be the reduction to monosyllabic stems usual with nicknames in -y/-ie, e.g., Stephen → (Steve →) Stevie.

⁵ The simplifying processes of language development and baby talk are often identical, but important differences also exist. For example, of the three types of cluster reduction in child language development discussed in Ingram 1974, two, sC → C and CL → C, are found in English BT but the third NC → C (when C is voiceless) is not attested in BT.

2.1 Simplifying processes.

The BT register as defined here consists only of language material identifiable as primarily appropriate for speech to young children. The actual speech addressed to young children may, of course, include other material. BT lexical items may, for example, be embedded in AS, or otherwise normal AS may be spoken with BT intonation or other prosodic features. BT in this narrow sense is clearly very restricted in scope and structure compared to normal AS. It has fewer types of sounds and permissible sound sequences, a very small lexicon, and only a rudimentary grammar, even though it is to some extent open in that a new BT word may be created or a word from AS may be modified and newly used as BT. Accordingly, insofar as BT may be regarded as derived from AS by linguistic processes, many of these processes are simplifying or reducing in nature.

The simplifying processes used in BT are not universal in the sense that they all occur in all languages. They differ from one speech community to another depending on differences in the language structure of the matrix language and on the actual BT conventions developed over time in the community. Some kinds of simplifying processes, phonological, grammatical, and lexical, are however quite widespread and may be found in the BT registers of unrelated and geographically distant languages.

Among the most widespread phonological simplifying processes in BT are the reduction of the structure of words to a few limited favorite shapes ('canonical forms'); the substitution of easier, simpler, less marked sounds for more difficult, complex, marked ones; and various assimilatory processes such as types of consonant or vowel harmony. These processes may overlap or interact as, for example, when a favorite canonical form includes features of consonant or vowel harmony.

Canonical forms differ from one language to another. In Berber BT the favorite form is a reduplicated CVCV of which either the second consonant or both consonants may be geminated (e.g. *bubu* 'lump of sugar,' *dud:u* 'butter,' *p:ap:a* 'bread'); in Syrian Arabic the favorite structure is CVC where the final consonant is geminate (e.g. *baħ:* 'all gone,' *tif:* 'go) bye-bye'); in Japanese it is (C)VCCV where the medial consonantism is either a long voiceless consonant or a nasal plus a consonant (e.g. *batʃ:i* 'dirty,' *enko* 'sit down'). The general tendency across all languages seems to be toward a reduplicated CVCV with possible lengthening of the medial consonant (e.g. Arabic *ku:ku* 'birdie,' Japanese *pop:o* 'birdie'), but the AS structure of each language apparently modifies this tendency; consonant gemination is a pervasive morphological feature of Berber, Arabic has many closed syllables, and the only syllable-final consonants in Japanese are nasals and voiceless obstruents, the latter only before identical consonants.

Sounds of the AS which require more delicate adjustments in articulation (e.g. fricatives) or are marked by having special added features (e.g. glottalization) are of low frequency in BT, reflecting either an avoidance of these sounds in the selection and creation of words or a process of substitution which replaces them by simpler sounds in BT. Kannada BT, for example, has no nasal vowels, retroflex consonants, sibilants, or liquids, all of which are in the phonology of the AS, and the length distinction in vowels is neutralized in BT words. Other examples are the nearly

total absence of emphatics and labialized velars in Arabic and Berber BT and the widespread simplification of clusters. The general tendency across all languages is for labial and apical stops and nasals to predominate and for liquids (l and r sounds) to be replaced or omitted. The r-sounds are particularly interesting because of the different substitution patterns across languages. In some languages the BT retains the apical place of articulation and reduces the r to a stop, in others the BT retains the liquid sonorant quality but reduces the trill or frication of r to a lateral continuant l, in others even the liquid quality is lost so that the r appears as a semivowel y or w or is omitted entirely. Examples:

r → t, d	Gilyak	AS /raf/ → BT /daf/ 'rice'
	Comanche	AS /ʔaraʔ/ → BT /ʔata:ʔ/ 'mother's brother'
	Hidatsa	AS /miréh/ → BT /mi:dé:h/ 'door'
r → l	Berber	AS /s-ɾuri/ → BT /ɾuli/ 'to me'
	Cocopa	AS /rápm/ → BT /in-lápm/ 'hurt'
r → j, w, Ø	Japanese	AS /kire/ → BT /kiekie/ 'clean'
	English	AS <u>rabbit</u> → BT <u>wabbit</u>

The treatment of r is a good illustration of simplifying processes in BT. The universal tendency seems to be to reduce the consonantality of r from trill to continuant to lateral to palatal semivowel to zero, and examples along this scale can be found in many languages, Marathi apparently offering the whole sequence of possibilities except total deletion (as in English little → 'ittle), but the details vary greatly and the tendency may be outweighed by other factors such as the phonological alternation r → d in Gilyak AS or the labialized quality of English r. Avoidance of r in suppletive BT words seems almost complete except when the trill itself constitutes an onomatopoeia or a game (Arabic or Marathi kurr).

Assimilatory processes commonly found in BT include nasal harmony, by which several nasal consonants in the BT word reflect a single nasal somewhere in the AS source word, and consonant-vowel adaptation, by which front vowels (e,i) co-occur with apical consonants and rounded back vowels (o,u) with labial and velar consonants. Examples:

nasal harmony	Japanese	AS /damé/ 'bad' → BT /me:me/
	Marathi	l → n when a nasal (m~ŋ) occurs in the word
	Gilyak	AS /damk/ 'hand' → BT /nama/
C/V adaptation	Japanese	<u>dede</u> 'go out' <u>bubu</u> 'hot water, tea'
		<u>ni:ni</u> 'cook' <u>pop:o</u> 'bird'

The assimilations may work in either direction:

1st syllable dominant	Japanese	AS	<u>kutsu</u>	'shoe' → <u>kuk:u</u>
	Latvian	AS	<u>nazis</u>	'knife' → <u>nan:is</u>
	Comanche	AS	<u>tikap</u>	'meat, fowl' → <u>tata:</u>
2nd syllable dominant	Japanese	AS	<u>mufi</u>	'bug' → <u>tjitji</u>
	Latvian	AS	<u>sap-</u>	'hurt' → <u>papa</u>

In spite of the widespread examples of these assimilatory processes they never seem to be carried out consistently even in a single language (cf. e.g. Japanese tonton 'stamp; ke:ke 'fur,' nonno 'ride'). In fact the assimilatory processes give the impression of prevalence largely because of the strong BT tendency toward reduplication in words not derivable from AS (e.g. Berber BT p:ap:a 'bread,' ji:ji 'meat,' huhu 'sleepy-byes') and in words derived from monosyllabic words in AS (e.g. Japanese BT hā:ha 'footsie' ← AS hā 'foot; Comanche BT papá: 'water' ← AS pá:).

Common simplifying processes in BT grammar include the reduction of inflections, the use of an all-purpose auxiliary 'make' with BT nouns and interjection-like words in place of inflected verbs, and the replacement of second person pronouns by other forms of address. Most of the descriptions of BT focus on phonology and lexicon and less information is available on grammatical simplification. Reduction of inflectional affixes is attested, however, for Arabic, Berber, English, Gilyak, Japanese, Kannada, Marathi, and Romanian. In Gilyak and Marathi overgeneralization of regular affixes is mentioned; the use of the definite article even when other inflectional affixes are lost is noted for Arabic and Romanian; and Berber BT seems to use the diminutive suffix as an imperative marker. In all studies of BT in which syntactic features are mentioned, the point is made that BT words may be used as sentence-words with a wide range of grammatic-semantic function or may be embedded in AS sentences in the position of nouns, adjectives, or interjections.

The BT lexicon generally has few words derived from AS verbs and reduced or non-existent verbal inflections. The use of a colorless auxiliary such as 'make, go, give' with BT words to make action words is described for five languages of our sample: English (e.g. go sleepy-byes, make peepee), Japanese (X suru 'do'), Kannada (X ma:du 'do'), Marathi (X kar 'do'), and Romanian (face 'do' da 'give'), and examples can be cited for other languages, such as French faire 'do' (e.g. faire dodo 'sleep') and Sahaptin mamak BT 'sleep' + ko:s 'do' (Weeks 1973). This would seem to be a way to limit the verb inflection to one stem and thus avoid the complication of conjugation with each verb. It is worth noting that three of the languages which have this construction in their BT, Japanese, Kannada, and Marathi, are languages with verb-final word order which have compound verbs of this kind in their normal AS. Their compound verbs make use of a number of auxiliaries ('do,' 'go,' 'come,' 'give,' 'take,' 'rise,' 'fall,' 'say,' etc.) with varying meanings, and the use of a single predominant auxiliary in BT constitutes a reduction in this grammatical subsystem. It would probably be a safe prediction that other verb-final languages with compound verbs, such as Turkish or Amharic, would also have the 'do' construction in their BT register.

One of the most interesting processes simplifying AS to BT is the avoidance of first and second person pronouns. Wills 1974 deals with this question in detail for both AS and BT in English; here only a few observations can be made. Unfortunately, most studies of BT do not discuss pronoun avoidance, but the use of third person nouns is well attested for English, Japanese, Marathi, and Romanian. All four make use of constructions such as Baby is finished? Mommy is coming in which a personal name, kin term, epithet, or indefinite is used to refer to the speaker or the addressee instead of I or you. Probably all four also use this construction in AS for special effects and in other special registers, as is shown by Wills for English. Japanese, however, has a BT usage which is not attested for any other language and certainly sounds rare or marginal for English. Chew 1969 and Fischer 1970, the former based on several years of observation in his own and other Tokyo families and the latter based on extensive interviewing of mothers in Fukuoka, both report that Japanese parents often use AS first person pronouns in place of second person pronouns in addressing young children. A boy is called boku, which is the common adult male word for 'I' used especially between adult males of similar age or status. Similarly a girl child is addressed as ataji, a common adult female word for 'I.' Apparently, this practice is continued (as well as third person reference constructions) until the child begins to refer to himself/herself with the pronoun whereupon the adults begin to use first and second person pronouns with their normal AS values. Perhaps this can be seen as a reduction of the complex pronominal system of AS Japanese with its great fluctuation depending on age, sex, and status. If so, it would be worthwhile to investigate the BT practices in other languages of East and Southeast Asia, such as Vietnamese, which have similar systems.

The omission of the copula, predicted as a general feature of BT in Ferguson 1971, is attested explicitly only in the Romanian study among our major sources. The evidence is inconclusive since some languages of the sample normally have no copula expressed in AS (e.g. Arabic and Berber), Japanese BT omits the copula with adjective (no examples cited with noun complement), and most of the studies give only a very limited treatment of syntax. This feature still deserves further investigation.

Probably the most obvious reduction between AS and BT is in the lexicon. Presumably any lexical item of AS could be used in utterances which include BT and presumably any lexical item of AS could be modified by the phonological processes of BT derivation, but in fact the set of words—whether independent or AS-derived—normally used in BT utterances is very small, on the order of 100 or fewer. Kelkar 1964 makes the interesting assertion that baby talk is "semantically as ambitious in its range as adult speech ... only it is less successful." This may be true in the same sense that any AS word is available for BT modification, but more important is his acknowledgment that in BT "certain areas of experience naturally come in for greater attention." Ferguson 1964 lists BT lexicon under four major headings: kin, body, qualities, and animals and games. On the basis of subsequent BT studies, two categories, food and animals, should probably be taken out and treated separately because of their number of lexical items. (See esp. Byman 1968 for discussion of these categories.) All deserve comment. 'Kin' includes kinship terms, personal names, nicknames, and epithets. The particular kin terms current in the BT of a community will tend to vary according to its

social organization but terms at least for baby, parents and grandparents seem to be universal. Often cover terms for several kin relationships are used in BT which will be sorted out in AS; a good example is Japanese BT *dʒiidʒi* which is used for 'grandfather,' 'uncle' and 'old man,' which are respectively in AS *odʒiisama*, *odʒisama*, and *dʒidʒii*. (Note that BT versions of the first two exist using *-f/sama* for the *-sama* honorific suffix; see 2.3 below.) 'Body' includes names of body parts and bodily functions; the two must be kept together since often the same lexical item is used not only for the part of the body but also for the activity associated with it, e.g. Japanese BT *anjo* 'footie' *anjo suru* 'do footie' = 'walk.' Here may be included also the words for clothing and foot-wear.

Although there may be a general word for 'food' the BT register of some communities includes a variety of special BT words for particular foods, which will depend on the eating habits of the society. Berber and Kanada will serve as examples (p. 12).

A BT lexicon for animals seems universal. Although the exact range of animals named differs from one speech community to another, it is not limited either by familiarity with domestic animals or the existence of pets. Clearly the animal vocabulary reflects the salience in the child's life of animate, moving beings with faces, legs, and fur or feathers, and the consequent important role of this semantic field for language development.

The category 'qualities' refers to adjectival predicates used of objects or events in the environment which in the adult's opinion are interesting or dangerous for the child. In some instances the BT word refers both to the object and to the attribute which is being asserted (e.g. fire = hot = burn). The basic list of predicates of this kind used in addressing small children is probably almost universal, but in some instances normal AS words are used, in others BT words, independent or modified AS, are used, and in some cases the BT word is related to an AS interjection of similar meaning, as in English BT *ow* for a hurt or something painful, cf. AS interjections *ow*, *ouch*!

The final lexical category comprises a set of terms designating infant games involving simple physical actions or special sounds or both. All speech communities seem to have a repertory of such games which are played with the very young child before he can produce any recognizable speech, and which may be continued with somewhat older children. It is likely that these may play a helpful role in the development of the child's ability to recognize the specific, essentially arbitrary connection between vocal signal and referent. Typical games include actions such as clapping hands, raising hands over head, clenching fists, hiding face, making noise in the ear, and carrying piggyback. It is likely that these game cues constitute one of the sources of action predicates in the child's language development, and the handful of more generalized verbal predicates 'go up' or 'fall down' which may not be tied to a game could also be included in this category.

BERBER			KANNADA		
BT	AS	Gloss	BT	AS	Gloss
p:ap:a	ayrum	bread	badʒ:i	madʒ:ige	buttermilk
t:ut:u	aħtuʃ	kind of bread	bo:tʃu	mosaru	curds
		cooled in hot	dʒa:ʃi	ha:lu	milk
		ashes	na:ni	do:se	cake
ʃiʃ:i	aksum	meat	pa:tʃa	pa:ʒasa	pudding
yuyu	ayu	milk	haŋ:i	haŋ:u	fruit
dud:u	udi	butter			
{	mama				
	b:wa(with labial trill)	aman water			
m:aħ:a	ataj	tea			
bubu	aħbub	grain of			
ħbubu	'grain'	roasted corn			
b:ʒu	tibʒuʃin	dates			
ħmam:u	tizlit	egg			
badar	tabadar	kind of omelet			
t:atʒa	sksu	couscous			
sisu, susu					
ħriri	aħrir	gruel, soup			

Other BT words are found which do not fall neatly into the categories set up here, an interesting example being the 'bogeyman.' Nine of the major sources examined here (Arabic, Berber, Comanche, English, Gilyak, Greek, Maltese, Marathi, Spanish) explicitly mention a mythical monster who is used to frighten children, and such an item may have simply gone unmentioned in the others (cf. Chamberlain 1890, Sapir 1929, and Sabar 1974 for a bogeyman in Algonkin, Nootka, and Neo-Aramaic respectively). Also, as has already been noted, a number of common BT items overlap several of the categories. In spite of this problem of classification, a lexical checklist based on these categories has been provided as an Appendix for the use of researchers observing or eliciting BT registers.

2.2 Clarifying processes.

All speech communities presumably have clarifying processes which are used by speakers to give extra clarity to their utterances when needed. For example, when the addressee has not understood an utterance directed to him and asks for a repetition the speaker may reply in a slower, more carefully enunciated style, fill in ellipses of his original utterance, or record the utterances in a less ambiguous way. Some of these clarifying processes are also used in BT, and a BT register may employ special clarifying processes of its own. Unfortunately, linguists have done very little systematic study of clarifying processes in general, and even published BT studies offer little information. Accordingly, the comments here are tentative.

The most obvious clarifying process in BT is repetition. Words, phrases, and whole sentences are repeated in addressing the young child in a way and to an extent not done in normal AS. This process is so 'natural' and universal (?) that speakers are only barely aware of using it. Adult informants from whom BT is being elicited by the linguist do not report repetitions, and adults asked by the psycholinguist in an experimental situation to speak as though they were speaking to young children do not do much repetition. However, observation of BT in natural settings and in experimental situations with children present shows extensive use of repetition, and this repetition is a very noticeable feature of BT when recordings are played out of context for adult reaction. In the psycholinguistic literature on speech to young children, all experimenters seem to have noted repetition; for a review of this see Snow (this conference). The intra-word reduplication described above in 2.1 may also be related to the repetition process and thus represent both simplifying and clarifying processes.

A second clarifying process characteristic of BT is the exaggeration of intonation contours, chiefly by extending the pitch range of the intervals. Pike and others have noted this process in English and now Garnica 1974 gives solid experimental data for it in English BT. It has been noted also in Marathi and Japanese BT, and it is probably quite widespread but not reported or included with the raising of pitch (2.3 below).

The set of phonological processes which result in lento speech constitute the most generally acknowledged clarifying processes in ordinary AS phonology, and they are also described as characteristic of BT registers. One of the best descriptions

is in Voegelin and Voegelin 1954 where the authors noted that the informant's BT pronunciations were very similar to the clarified forms she used in dictating Hidatsa to members of the Field Methods seminar. It has repeatedly been observed that lento forms tend to be closer to the 'underlying' forms posited to account for morphophonemic alternations (e.g. Kazazis 1969); as the Voegelins put it, the 'mother language' form often "coincides with or resembles the morphophonemic formulae which we are tentatively setting up." (op. cit. 70). These lento processes in various languages include: supplying elided vowels or consonants, separating fused vowels, increasing the number and level of stresses, inserting additional junctures (= use of non-medial allophones in medial position).

Some phonological clarifying processes in BT seem to represent segmental strengthening which goes beyond the morphophonemic alterations of normal AS. These strengthening processes typically increase the perceptual salience of particular consonants or vowels either by lengthening, gemination or by quality changes (e.g. fricative — stop or affricate). In some instances there are even additional segments, such as h or ʔ added after a final vowel. Examples:

	AS		BT
Berber	tiyyni	'crushed dates'	(n)ninni
	atay	'tea'	ttattay
	afa	'fire'	fuffu
Comanche	ʔiñi	'insect'	ʔiñi·ʔ
	káhhɪ	'house, tipi'	kani ʔ
	wáʔo·	'cat'	waʔo·ʔ
Japanese	(o-)sar(u)-san	'monkey'	otfarutʃsan
	ha	'leaf'	happa
	(o-)heso	'navel'	opetʃo

Comments: In Berber "there is a considerable increase in gemination accompanied by some apparent weakening of its contrastive value (in initial position)." (Bynon 1969:121-2). In Comanche BT words derived from adult vocabulary are put into "the baby word phonetic pattern of two syllables with the second vowel accented, long and usually ending in a glottal stop Presumably it is in this phonetic form that words are first presented to the child. This seems consistent with our practice of carefully enunciating words when teaching them to a child." (Casagrande 1948: 13). In Japanese BT /h/ is sometimes strengthened to /p/, medial consonants are geminated, and s → tʃ. The h → p process reverses diachronic weakening, since modern Japanese h generally goes back to earlier *p, and it is conceivable that the p in BT words may in some instances continue the earlier sound unaffected by the sound change.

2.3 Expressive and identifying processes.

The most prominent expressive feature of BT is probably the hypocoristic affix. In BT registers morphological devices, most commonly suffixes, which are used in AS to form diminutives or hypocoristics are used more frequently and in different ways. An excellent example is the increased use of diminutive suffixes in Latvian BT. The language has a rich selection of diminutives in AS but these are even more used in BT (Ruke-Dravina 1959, 25-35). Often one particular device is used chiefly or exclusively in BT and thus serves to identify the register. The English suffix *-y/-ie* is an example of this, but perhaps even better examples are Gilyak *-k/-q*, Berber *-s/-st*, and Japanese *-ko*. These suffixes are added to AS words or may replace part of the AS word, and they are used almost exclusively in BT, although the Gilyak suffix may sometimes be used in language play apart from BT. Some BT words without AS counterparts may have the suffix, and in some instances a BT word may occur either with or without it. Examples:

	AS		BT
Gilyak	gi	'shoe'	gik
	als	'berry'	alq
	daf	'house'	dafk
	(ŋawr')	'abdomen'	gomk
	(leqrnt)	'toy'	bapa, bapk
Berber	ixxa	'nasty, dirty'	xxistt
	ʒn	'sleep'	hu, huf, hufstt
	iff	'breast'	bbu, bbu
	(tʃi timitt)	'(give me a kiss)'	babahhastt, mmaahhastt
Japanese	daku	'hug'	dakko
	neru	'sleep'	nēnko (suru)
	ŋn	sound of making effort	ūnko (suru)

Other examples include the Quileute BT suffix *-ck*, which is one of a set of affixes characterizing different kinds of abnormal speech (Frachtenberg 1918); Syrian Arabic *-o*, which is also used to make nicknames and kinterms of address in AS, Latvian *-in-* used only BT verbs; and Comanche *n-* also diminutive in AS.

The addition of a derivational affix produces a longer form which a simplifying process may shorten. In Rumanian this process has been noted for a number of words e.g. *unchi* (untf) 'uncle' + *utul* diminutive suffix → *unchiutul* → *chiutul* (tʃutsu), Avram 1956: 139. Gilyak has five BT words which lack the *-k/-q* suffix which the corresponding AS words have and Austerlitz 1956: 271-2 argues that the AS words are originally BT in origin while the new BT words are shortenings.

It is conceivable and open to empirical investigation that the characteristic BT suffix may play a role in the development of the child's grammar, since it may be the first morphological element which the child finds segmentable and thus may begin the development of derivational and inflectional morphology. We could wish that Brown 1973 had included -y/ie among the 14 grammatical morphemes he investigated.

The most prominent expressive feature of pronunciation in BT is probably the use of higher pitch in addressing children. This feature, which is distinct from the exaggeration of intonation contours mentioned in 2.2 and is very likely universal, is probably the principal component of the phenomenon of Ammenton 'nursery tone' mentioned by many observers. Its ultimate origin is presumably in the adaptation being made to the child's own higher fundamental frequency resulting from the smaller vocal tract and other differences in the shape of the cavities, size of vocal cords, etc. Garnica 1974 now provides experimental data for this phenomenon on the part of American mothers. This prominent prosodic characteristic may well play an important role in identifying speech addressed to the young child, thus signaling to the child that he should attend to it and signaling to older children and adults present that it is not directed to them.

The displacement of word accent to a position different from AS is characteristic of some BT registers, and is often hard to attribute to simplification or clarification. Examples of displaced accent in BT include Japanese (BT initial accent except in reduplicated adjectives) and Comanche (BT final accent, cf. 2.2). Of special interest is the pattern of contrast between CVCV and CVCV BT words in Spanish and Rumanian, which has no obvious lexical source in AS, e.g. Rumanian pápa 'food': pápá 'bye-bye'; nána 'older sister, aunt': naná 'watch out, no no'; Spanish pípi 'bird': pipí 'peepee.' This could be regarded as a device for helping the child to acquire the distinctive use of stress for AS.

A striking feature of BT phonology is the presence of sounds or phonetic modifications not found in the corresponding AS. This phenomenon can hardly be viewed as simplifying or clarifying, but makes sense in terms of sound symbolism, limitation of child speech, or simply register identification. The commonest modifications seem to be 'softening' or palatalization of consonants and the corresponding 'sharpening' of vowels, and labialization of consonants and vowels. For example, labialization and palatalization are both reported for Latvian and Marathi baby talk, labialization is attested for English (Joos 1949: 108 fn.) and palatalization for the Western Desert Language of Australia (Miller n.d.). Retroflexion as a BT feature is reported for the San Felipe dialects of Otomi (Bartholomew 1960: 319).

Examples of specific BT sound are especially common in American Indian languages: v in Cocopa (Crawford 1970), l in Nootka (Sapir 1929), labials p b m in Iroquois (Chamberlain 1890), x and long m in Comanche (Casagrande 1948), but they are also well attested in other languages: p in Berber and Arabic (Bynon 1968: 116 and 141), long m; and ʔ in Gilyak (Austerlitz 1956: 268 and 277), final -m in Japanese (Chew 1969: 10). It is worth noting that almost all these examples are labials. The special role of labial sounds is shown also in the frequency of emphatic /b/ and /m/ in Arabic BT words (including BT baba and mama used also as affective terms in AS) in comparison with the complete absence of non-labial emphatics, thus reversing the frequencies of AS. Berber and Latvian BT include a labial trill not part of the regular AS.

Typically, these specific BT sounds are anchored to particular lexical items, and adult speakers find them difficult or impossible to pronounce otherwise. BT registers also tend to have exclamatory segments consisting of a prolonged fricative or sonorant which does not occur as a syllabic in AS; this reflects (and encourages?) the child's creation of such items in his own early language development. Example: *f*: 'urinate' in Japanese and Marathi.

2.4 Variation.

BT registers, like any other variety of human speech, show internal variability in the sense that some elements and structural relations may vary under partially or completely non-linguistic conditions. The dimension of regional and social dialect variation in BT has been explored relatively little and that little has not been systematic, i.e. incorporated into final linguistic statements of cooccurrence or variance. Treatments of regional variation vary from an impressionistic observation (Kelkar 1964) that there is no dialect variation in the Marathi BT register — an improbable assessment for a speech community of millions of people — to an attempt (Bynon 1968) to assemble exhaustively all the information about BT published for any variety of Berber. Explicit treatment of regional variation also appears in Ferguson 1956 (Arabic) and Rūka-Draviṇa 1961 (Latvian) but nowhere is there an attempt to characterize the variation either in traditional dialectological terms (isoglosses, focus areas, relic areas), or by means of Labovian variable rules, or in any other variation framework. Social variation has been studied in English and Dutch BT from a different perspective, cf. Drach et al. 1969 and Snow et al. 1974.

The most interesting dimension of variation from the viewpoint adopted here of linguistic processes relating AS and BT is that of degree of 'babyishness.' Several authors have pointed out that utterances addressed to children as well as specific BT forms within them fluctuate within the same language in the degree to which they diverge from AS. Kelkar 1964 was apparently the first to formalize this phenomenon by writing rules with successive outputs of increasing degree of babyishness. Avram 1967 discussed the same phenomenon by means of an extended example, giving different forms of telling a baby to go to sleep:

AS	BT 1	BT 2	BT 3
dormi (copile)	copilul face nani	copilul nani	pilul nani
	<u>or</u>	<u>or</u>	
	face nani copilul	nani copilul	

The first degree of babyishness replaces the AS word for 'sleep' with a BT equivalent 'make sleep-byes' and uses 'the-baby' as a third person subject instead of the optional vocative. The second degree omits the 'make' and the third degree drops the initial syllable of 'baby.' Drachman 1973 formalizes the notion of degrees of babyishness by positing 'stages' of successive operation of rules but pre-scinds from an judgment of whether the forms classified in the various stages are rated by members of the community in appropriate degrees of babyishness or whether they have developed historically in the order of his rule application. Clearly,

this whole area deserves investigation of the kind becoming increasingly common in studies of pidginization and decreolization (cf. De Camp 1971, Bickerton 1973, Cedergren and Sankoff 1974); it should also be tied in to the kinds of experimental investigation which test BT modifications to children of different ages.

The one linguistic description which reports a systematic relationship between the degree of babyishness in the BT register and the state of the child's language development is the study of Japanese BT by Chew 1969. The author had the opportunity to observe the use of Japanese with the same children over a two-year period and he posits five 'styles' from the earliest (or most 'babyish') BT to normal AS. Although Chew allows for overlapping and inconsistency in detail, he claims a succession of styles as follows: Style 1 consists of one-word BT utterances with optional repetition and the insertion of *ko* or *da*, together with certain features of intonation and tempo; only a few lexical items are used. Style 2 extends the lexicon and makes use of a number of processes modifying AS items. Style 3 has utterances of more than two lexical items, but without inflectional and connective particles. Style 4 has many of these particles and multiclausal sentences. Style 5 is approximately AS. Chew does not discuss the conditions for shifting to successive styles, but Fisher 1970 in discussing this phenomenon in Japanese notes how complex the issue is, involving both the adult's estimate of the child's language development and the child's own perception of his readiness to shift.

This is one of the most promising areas of research in child language development: to describe the nature and scope of variation in degree of BT divergence from AS, and the relation between this variation on the one hand and the attitudes of the speech community and the actual progress of language development on the other.

3. Use of Baby Talk.

The primary use of the BT register is to speak to young children, but it may have a variety of secondary, 'displaced' uses (Ferguson 1975:2) which evoke one aspect or another of the adult-child communication. Unfortunately, the uses of BT have rarely been described in any detail, and the published studies which give data on lexicon, etymologies, and striking features of structure give only very fragmentary information about use. This lack of information reflects both the linguistic bias of the investigators of BT and the method of elicitation employed as a short cut to observation in natural settings. Even the primary use is rarely specified in terms of who uses BT, the ages of the children addressed, and other basic information. Here we can only report what the published studies provide.

A number of studies report on the ages of the children with whom BT is used. They tend to agree on use from about age 1 to about age 3 or 4 while allowing for its use with older children under special conditions. Gilyak speakers are reported to use BT until weaning, which is usually at age 3 but may be anytime from 2 to 8. The Comanche speech community is said to use BT when the baby is old enough to understand speech (about 1 year of age) up to the time he has mastered the fundamentals of the language; if a child uses BT forms as late as age 5 he is ridiculed. Cocopa BT use is the most interesting: for boys up to the age 6 or 7, girls up to 10 and even in early and mid-teens when the mother

wants to show affection, and at least one informant reports that BT may be addressed to an unmarried female of any age as a reminder of her status. In Japanese use is reported to begin before the child speaks at all and the upper limit seems to be kindergarten or nursery school age.

In several studies investigators record reasons given by the informants for the primary use of BT, usually 'to teach the child to speak' (e.g. so in Berber and Comanche) but sometimes in other terms. Fischer reports "the key words are easier to pronounce for the child, and the child cannot understand the adult words as well," "the adults in the family used these words because they were cute," and one mother "wanted to use the same words as the children used" (Fischer 1970:109).

The interesting and important questions about the use of BT register with children require research techniques of anthropological observation and psycholinguistic experiment: use by older children and adult non-mothers, differential use to different ages, sexes, and social groups; who initiates the shift to AS and how, and all the rest. Fischer 1970 and Chew 1969 combine to give us more information about BT use in Japanese than any other language, but it is still fragmentary and unsystematic.

Secondary uses are even less well reported. Bynon asserts that there are no secondary uses in Berber, explicitly noting that the BT register could not be used to animals or between lovers, yet it is hard to believe that there is no extension at all to situations which call for some aspect of the values of BT, since registers tend to be extended by analogy, metaphor, and 'semantic' extension in the same way other units and levels of language are extended. Use of BT to animals is well documented for English and reported for Marathi but goes unmentioned in most BT studies. Read 1946 gives a number of examples including Shaw's *Androcles and the Lion* and modern newspaper stories; one American linguist of my acquaintance claimed never to use BT at all, only to realize she spoke almost constant BT to her cat. Since it seems safe to assume that the speaker is not attempting either to make his speech easier to understand or to teach the animal to talk, the use of BT to animals must be expressing affection or reinforcing the speaker's own feeling of taking care of the animal.

Another extension of BT which expresses its nurturant, caretaking message is its use with hospital patients, elderly people, and other adults being tended by nurses, doctors, attendants, technicians, or family. In this situation the full range of BT features is not used, and it would be of interest to determine which features are found most appropriate for this use. The avoidance of first and second person singular pronouns, which is common in this use of BT, can hardly be explained as a means of facilitating the eventual mastery of the pronoun system, which seems a reasonable motivation in the use of BT with young children. It may possibly be seen as a way of mitigating the directness of commands and questions between caretaker and person-cared-for, but it is likely that the BT register is in some sense being extended as a unit, since a significant number of other features in the cluster of features constituting the BT register appear also in this use.

The use of BT between intimate friends and lovers, which is also well attested for English, Spanish, Latvian, Marathi, and other languages, may similarly express

a re-creation of the nurturant-nurtured roles, but it may also simply express affection between the users. Read and Kelkar both cite the classic example of Jonathan Swift's *Journal to Stella* but many other examples can be given, and this use is a familiar phenomenon and seems to be quite widespread in spite of often being discounted or ridiculed. In this use many of the phonological features of BT are more frequent than in the caretaker use. Once again it seems that the use of the register is extended as such, but that certain features are selected as more appropriate for the particular use.

The BT register often serves the purpose of coaxing or persuading in adult-child, caretaking, and intimate uses, and in all three situations the coaxing may go in either direction, i.e., adult to child or child to adult, etc. A further extension of BT is to attempt to persuade or cajole addressee not in the categories of the uses already identified. This 'wheedle' use as Read calls it can even be extended to objects or to unknown addressees. Read offers, among other examples, Alexander Woolcott's amusing habit of using BT in addressing his dice at backgammon, this from a person who repeatedly ridiculed in print the use of BT in other settings. Another example of extension is its use in certain forms of advertising (cf. Read 1946 for discussion).

Finally, some secondary uses of the BT register seem to have little or no trace of the affective, nurturant, or coaxing aspects of the primary use, but seem to serve only to signal the childhood status of participants in the communication situation. In a number of languages the BT register is used to report child speech, much as foreigner talk is used to report the speech of foreigners (Ferguson 1975); an excellent example is provided by Norwegian as discussed in Haugen 1942 where a novelist may use BT register to represent the speech of children even though the children being portrayed would not talk that way, given their age and situation. A use which signals childhood status with pejorative flavor is what might be called the 'mocking' use, as seen in sarcastic and satirical language. Read offers one example in which it is senility or need for caretaking which is being suggested by the use of BT, the American presidential campaign of 1840 in which Harrison's political opponents represented his friends as speaking baby talk to him.

Further examples of the status-attribution use can be found in the use of BT features in nursery rhymes, songs, riddles; adult literature about children; and in conventionalized adult word-play. Sobar 1974 gives examples of BT register in Neo-Aramaic nursery rhymes, Růke-Draviņa (this conference) discusses the use of BT terms in Latvian pediatric publications, and Austerlitz 1956 mentions word play phenomena.

Closely related to questions of the use of BT is the set of attitudes toward BT held by members of the speech community. Several authors have mentioned the issue of attitudes (cf. especially Ferguson 1964: 112) and it is clear that communities may differ greatly in their overt approval or disapproval of BT and the occasions for which it is appropriate, but there has been no systematic investigation along the lines of recent studies of language attitudes (cf. Agheyisi and Fishman 1970 and Shuy and Fasold 1973).

4. Baby talk and language acquisition.

The universal presence of BT in speech communities requires explanation. What functions does BT fill which have assured its survival everywhere as a component of language structure and language use? It is possible to speculate on answers to this question, given the facts as summarized in this paper.

First, there are direct functions of communication and self expression. The structure of BT is, like that of any other simplified register, in large part a response to the need for improved communication when one of the participants has only a limited ability to use language normally. By neglecting some of the complications of normal speech and modifying it in other ways which clarify it and adjust it to the child's ability, BT is easier to understand. This claim needs experimental validation in order to determine the extent to which various features of BT increase intelligibility under what conditions, but it certainly seems likely that the overall effect of the use of BT is to increase the attention holding and intelligibility of the adult's speech to the child even if some of its features may have no such effect or even a negative effect. Also, the use of BT facilitates the adult's expression of his emotions toward the child and the situation, giving him a special means to show affection, irritation, protectiveness, amusement, and so on, which goes beyond normal AS. In this use BT is similar to such other expressive devices as compliments, insults, interjections, nicknames, and so on. The importance of this expressive dimension for the speaker of BT should not be overlooked; its strength can be seen when a parent talks BT to a sleeping child or in some of the displaced uses listed in 3. above.

Second, there are language teaching functions. If one were to design a plan of language exposure to accelerate mother tongue acquisition, it would very probably be along the lines of BT. One would indicate by special signs when speech was being addressed to the infant, and the talk itself would be primarily in situations and on matters of immediate concern for child and parent. One would make certain simplifications and gradually restore the complexity as the child's language progressed. It might even be a part of the plan to have a separate lexicon which could function outside of the regular grammatical structure in semantically more transparent and flexible ways; such an extra lexicon could then gradually be abandoned as the grammatical structure itself is acquired or might even be retained for some special expressive use. Of course, this is purely speculative until there is experimental evidence that learning is actually assisted or accelerated by the use of BT. Given the wide variation in the details of the structure and use of BT from one community to another and from one family to another, it seems highly unlikely that it is a crucial element in the acquisition process. If the effects of BT as a teaching device were decisive, this would certainly have been noticed long ago in many societies, and in particular by child development researchers. But in the absence of detailed experimental evidence one can still join Snow's observation (Snow 1972: 561) that the speech addressed to young children "in many ways seem quite well designed as a set of 'language lessons'."

Even if one did not accept the value of BT in acquiring the language as a whole, it cannot be denied that its use with young children has the effect of teaching this register for use in other situations in adult life. To take an extreme

example, the exaggerated use of diminutives in Latvian BT undoubtedly succeeds in ingraining the forms and functions of diminutive expressions for affective and topical use in AS.

Third, there are non-linguistic functions of socialization. BT offers a means of identifying the social roles which the child must learn as requiring differential behavior in his society. All BT registers have words for male and female adult caretaker and baby which are 'taught' very early. The use of BT intonation, lento articulation and such features in itself delineates roles: typically caretakers use them to the child, not to one another; older children use them to younger children, not to still older children; female caretakers use them more often than male caretakers, and so on. Age, sex, and kin roles are thus signaled insistently by BT. The most striking example in our data is the differential use of male-female pronouns in Japanese BT register.

The lexicon of BT by its 'qualities' category begins the assignment of the society's values. From its earliest exposure to speech the child has objects and events around it called good, bad, dirty, dangerous, hot, cold, painful, sweet, and the like. The teaching of values which Gleason 1973 notes as so important in the 'language of socialization' which she observes in use with 4-8 year olds, has begun long before in the earliest use of BT. A convincing example is the acquisition of the word pretty by children learning English. This word, pronounced in exaggerated BT style, is so often and so emphatically used in talking to infants that it is frequently among the first words acquired, the most famous instance being Hildegard Leopold. It was her first word and was pronounced with great phonetic precision (for discussion, see Leopold 1939-47, I: 24, 119-20; II: 265).

In addition to these three basic functions which BT seems to fill in all speech communities, additional uses may be made of the register in particular communities as with any cultural resource in a society's inventory. We may note the widespread, but not universal uses of reporting child speech and addressing animals (cf. 3. above). A function which has been noted by several observers is the provision of childish euphemisms for taboo words. For example, when a child learns the name for a body part or physiological activity he may use it in public conversation at inappropriate times causing embarrassment to adults, but if what he uses is a baby talk term instead of the normal adult name the occurrence may be only annoying or 'cute.' A related function, noted already in 19th century linguistic studies is to serve as a source for affective or euphemistic vocabulary in the adult language, as when atta becomes the Gothic word for 'father' or tummy the English word for 'stomach.'

The data available from BT studies, together with some cautious speculation, suggests that baby talk registers are universal because they have been effective in meeting universal needs in communication and self-expression, acquisition of language, and the general processes of socialization. Before their exact role in language acquisition can be determined, more experimental work of the kind summarized by Snow (this conference) and more cross-cultural studies of language socialization of the kind discussed by Blount (this conference) are needed. For the incorporation of BT phenomena into linguistic theory the most promising lines are the variation models (cf. Bailey and Shuy 1973) and register analysis (cf. Ellis and Ure 1969; Report 1972: 47-76); both of these require much more extensive and exacting data collection than has yet been the case in studies of BT registers.

LANGUAGE	REFERENCE	DIALECT	Natural Observ.	Elicit.	Number of Informants	Own Exper.	Publ. sources	COMMENT
ARABIC	Ferguson 1956	Syria, Palestine, Lebanon	-	+	2 fam. + 3 addtl. inf.	-	+	Other dialect ref. in footnotes.
BERBER	Bynon 1968	Central Morocco	-	+	1 prin. inf.	-	+	Mat. tape record.; other dialects incl. extensive use, publ. sources.
COCOPA	Crawford 1970		+	+	1 family	-	-	Notes on other Amerindian langs.
COMANCHE	Casagrande 1948		-	+	8 infs.	-	-	From memory; C. no longer spoken by child;; notes on other Amerind. lgs.
ENGLISH	Read 1946 Ferguson 1964	G. Britain, USA USA	- +	- +	 6 inf.	- +	+	Incl. publ. sources, 18th cent. on; casual elic., friends, colleagues.
GILYAK	Austerlitz 1956	SE Sakhalin	-	+	1 inf.	-	-	Mother reporting her own use.
GREEK	Drachman 1973	Athens, Cypriot Acarnanian	?	+	Several; # not indic.	+	-	Incl. detailed comparison, pet names; BT material collected, Athens.
HIDATSA	Voegelin & Robinet 1954		-	+	1 inf.	-	-	Elicitation, ling., inst., 1953 some material taped.
JAPANESE	Fischer 1970 Chew 1969	Fukuoka Tokyo	- +	+	35 infs. 6 families	- +	-	Intervws., mothers, schoolchildren, 1961-62; obs. usage, own children compared with others.
KANNADA	Bhat 1967	Southern Havyaka	+	-		+	-	
LATVIAN	Rūke-Draviņa 1961		+	+	Not indic.	+	+	
MALTESE	Cassar-Pulliciano 1957		-	-		+	+	Ext. use, publ. sources, 18th cent. on incl. analysis of pet names.
MARATHI	Kelkar 1964	Standard	+	-		+	-	
ROMANIAN	Avram 1967			+	Not indic.	+	+	Data rep. only "partie de ceux que nous avons recueillis."
SPANISH	Ferguson 1964	Mexico, Chile	-	+	2	-	-	

TABLE 1. MAJOR SOURCES OF BABY TALK DATA

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